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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/018,244 | 12/18/2001 | Kang Ho Ahn | 2438-063 | 8791 |

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EXAMINER

EVANS, ROBIN OCTAVIA

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3752

DATE MAILED: 03/29/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/018,244

Applicant(s)

AHN ET AL.

Examiner

Robin O. Evans

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 8-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 12-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species I, Fig. I: claims 1-7 and generic claims 12-15 in Paper No. 6 filed December 23, 2003 is acknowledged.
2. Applicant's election with traverse of claims 4-6 in Paper No. 6 is acknowledged. The traversal is on the ground(s) that the claims involve a single inventive concept. This is found persuasive because claims 4-6 depend from elected claim 1 and contain all of the elements of that claim as described in the MPEP section 1893.03(d) and Annex B of the PCT Administrative Instructions. It should be noted that since the traversal did not contain arguments with regard to claims 8-11 those claims are deemed non-elected without traverse as noted above in paragraph 1.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 and 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaufman et al.

Kaufman et al. shows an apparatus for manufacturing ultra-fine particles having a guide duct 164, capillary 176 with insulating jacket 72, carrier gas supplying means 168, voltage supplying means 174, heating means 170 and collecting means 184.

As to claim 3 and the limitation of a cooling means, Kaufman et al. also discloses and embodiment wherein a cooling means is used, see column 6, lines 25-31.

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The device shown by Kaufman et al. will perform the steps recited in the method claims during normal operational use of the device.

5. Claims 1-3, 7 and 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Allen et al.

Allen et al. shows an apparatus having a guide duct, capillary 24, carrier gas supplying means 36, heating means 37, collecting means 12, 72 and cooling means 74, 22.

The device shown by Allen et al. will perform the steps recited in the method claims during normal operational use of the device.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4-6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufman et al. in view of Marks.

Kaufman et al. shows all of the claimed limitations including insulating the capillary but does not show a plurality of capillaries on a pipe. Marks shows a plurality of capillaries 16 on a pipe. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the apparatus shown by Kaufman et al. with a plurality of capillaries as shown by Marks so as to supply more liquid to the guide duct as desired.

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As to claim 7 and the limitation of the voltage supply having a plurality of resistors, it is deemed that the type of voltage supply means will be chosen by the user depending on the amount of voltage desired in the application of the device.

8. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen et al. in view of Marks.

Allen et al. shows all of the claimed limitations but does not show a plurality of capillaries on a pipe. Marks shows a plurality of capillaries 16 on a pipe. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the apparatus shown by Allen et al. with a plurality of capillaries as shown by Marks so as to supply more liquid to the guide duct as desired.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Richards, Labowsky et al., Kim et al., and Pui et al. all show devices in the general state of the art of the invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robin O. Evans whose telephone number is (703) 305-5766. The examiner can normally be reached on Monday-Thursday, 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mar can be reached on (703) 308-2087. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Robin O. Evans
Primary Examiner
Art Unit 3752

3/21/04

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